

Calculation of optimal alternatives at reconstruction of residential housing

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Abstract

Choosing the reconstruction method for improvement of built up areas depends on various factor, which served as a ground for their development (city planning, architecture and construction, economic, investment etc.), including attractiveness for investors and economic safety. One of the methods carry out mathematical calculations is the analytic hierarchy process, which requires creation of various alternatives of reconstruction projects. This article sets forth the method for choosing the optimal reconstruction alternative through comparison of various planning solutions. The proposed methodology makes it possible to eliminate the influence of possible subjectivity of expert judgments and withdraw from the expert method of optimality appraisal of various options of existing municipal development reconstruction.

Keywords

Mathematical modelling, Matrix method, Residential area reconstruction, Residential planning, Residential real estate, Saaty method, Vector analysis